

INTERNATIONAL SEARCH REPORT

Int. Application No.
PCT/EP03/06613

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01M4/92 B01J23/60

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01M B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 298 462 A (ANTOS GEORGE J) 3 November 1981 (1981-11-03) abstract example II	1,2,4,5, 17
X	US 4 536 259 A (ENDO H EIJI ET AL) 20 August 1985 (1985-08-20) column 1, line 6 - line 16 column 3, line 43 - line 68 column 6, line 20 - column 8, line 44 table 2	1,2,4,5, 17
X	US 4 100 180 A (ICHIKAWA YATARO ET AL) 11 July 1978 (1978-07-11) abstract example 6	1-7,12, 13,17
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

25 June 2003

Date of mailing of the international search report

09/07/2003

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 001, no. 131 (C-029), 28 October 1977 (1977-10-28) & JP 52 084193 A (TEIJIN LTD), 13 July 1977 (1977-07-13) abstract	1-7, 12-15, 17
X	DE 17 96 043 A (SIEMENS AG) 2 March 1972 (1972-03-02) page 2, line 18 -page 4, line 21	1, 2
A	EP 0 129 399 A (ENGELHARD CORP) 27 December 1984 (1984-12-27) abstract	18-36
A	EP 0 899 348 A (EXXON RESEARCH ENGINEERING CO) 3 March 1999 (1999-03-03) the whole document	18-36
A	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 12, 25 December 1997 (1997-12-25) & JP 09 206597 A (AQUEOUS RES:KK), 12 August 1997 (1997-08-12) abstract	18-36

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Int. Application No.

PCT/93/06613

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4298462	A	03-11-1981	US 4238365 A	09-12-1980
			US 4374046 A	15-02-1983
US 4536259	A	20-08-1985	JP 1368469 C	11-03-1987
			JP 59025986 A	10-02-1984
			JP 61036591 B	19-08-1986
			AU 561618 B2	14-05-1987
			AU 1684483 A	19-01-1984
			BR 8303808 A	21-02-1984
			CA 1225614 A1	18-08-1987
			DE 3378220 D1	17-11-1988
			DE 3381929 D1	08-11-1990
			EP 0099051 A2	25-01-1984
			EP 0209913 A2	28-01-1987
			IN 162001 A1	12-03-1988
			KR 8900179 B1	09-03-1989
			ZA 8305135 A	26-09-1984
US 4100180	A	11-07-1978	JP 1199099 C	05-04-1984
			JP 51075010 A	29-06-1976
			JP 58029768 B	24-06-1983
			JP 1162680 C	10-08-1983
			JP 51075011 A	29-06-1976
			JP 57054489 B	18-11-1982
			BE 837057 A1	16-04-1976
			DE 2557915 A1	11-11-1976
			FR 2295940 A1	23-07-1976
			GB 1491579 A	09-11-1977
			NL 7515083 A	29-06-1976
JP 52084193	A	13-07-1977	JP 1237427 C	31-10-1984
			JP 59012343 B	22-03-1984
DE 1796043	A	02-03-1972	DE 1796043 A1	02-03-1972
			CA 955645 A1	01-10-1974
			FR 2017170 A5	22-05-1970
			GB 1268236 A	22-03-1972
EP 0129399	A	27-12-1984	AT 29801 T	15-10-1987
			CA 1221403 A1	05-05-1987
			DE 3466323 D1	22-10-1987
			EP 0129399 A1	27-12-1984
			JP 60007941 A	16-01-1985
EP 0899348	A	03-03-1999	US 5916702 A	29-06-1999
			CA 2242085 A1	15-02-1999
			DE 69805579 D1	04-07-2002
			DE 69805579 T2	19-12-2002
			EP 0899348 A1	03-03-1999
			JP 11126616 A	11-05-1999
JP 09206597	A	12-08-1997	NONE	